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10/076,049	02/13/2002	Osamu Nabeta	M1971-107	8629

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EXAMINER	
DOTE, JANIS L	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,049	NABETA ET AL.	
	Examiner	Art Unit	
	Janis L. Dote	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1--24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *12/23/03* .
4) ☒ Interview Summary (PTO-413) Paper No(s). *12/15/03* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Dec. 23, 2003, has been entered.

2. The examiner acknowledges the amendments to claims 1 and 8, and the addition of claims 15-24 filed on Dec. 23, 2003 (Amdt122303). Claims 1-24 are pending.

The examiner notes that the originally filed specification does not expressly disclose the limitation "electron transport agent is a compound other than diphenoquinones" recited in instant claims 15 and 16. However, the originally filed specification at page 17, line 16, discloses that the electron agent may be a diphenoquinone. Since applicants can exclude what they did possess, the exclusion limitation recited in instant claims 15 and 16 has antecedent basis in the originally filed specification. See In re Johnson, 194 USPQ 187 (CCPA 1977).

3. The examiner deleted the indication that English translations of the Japanese patents were provided from the form PTO-1449 filed in the Information Disclosure Statement on Dec. 23, 2003. Applicants did not provide translations of the patents, but only provided English-language abstracts describing said patents. The examiner has corrected the form PTO-1449 to indicate that English abstracts were provided.

4. The rejection of claims 1-14 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Sep. 23, 2003 (CTFR092303), paragraph 6, has been withdrawn in response to applicants' remarks in Amdt122303, page 9, that the term "'belt-type' is defined as 'endless flexible'" in the instant specification at page 3, line 11.

5. The examiner notes that following term is a means-plus-function limitation covered by 35 U.S.C. 112, sixth paragraph: "means for electrophotography processing that are placed on the periphery of said photosensitive body" recited in instant claims 5-7 and 12-14. The specification at page 13, lines 3-5, recites "means for electrophotography processing, such as charging, light exposure, developing, transferring, cleaning,

and the like." The only structure provided for such means is shown in instant Fig. 3. Fig. 3 comprises a charging device **35**, a light exposure system **36**, a developing system **37**, a transfer system **39**, a cleaning system **43**, and a charge removal system **44**. The specification further discloses that the transfer system comprises an intermediate transfer belt **40** and a transfer device **41**. See the instant specification at page 31, lines 17-22, and Fig. 3. That structure, and equivalents thereof, define the literal scope of the "means for electrophotography processing . . ." recited in the instant claims.

Applicants' comments in the response filed on Jun. 30, 2003 (Amdt063003) have been addressed in CTFR092303, paragraph 4.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 6, 7, 13, 14, 20, 22, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 13 are indefinite in the phrase "photosensitive body stretched with a tension of 50 N/cm per unit length of the width of the photosensitive body" (emphasis added) because it is not clear what is meant by the phrase. It is not clear whether the phrase means that the body is stretched over the rollers with a tension of 50 N/cm applied across the width of the photosensitive body or that the body is stretched over the rollers with a tension of 50 N/cm per some unit of length of the width, e.g., N/cm^2.

Claims 7 and 14 are indefinite in the phrase "image forming device selected from a printer, copier . . . and printing press" (emphasis added) for improper Markush language. Proper Markush language is "R is selected from the group consisting of . . . and . . ." or "R is . . . or . . ." MPEP 2173.05(h) (8th ed., Rev. 1, Feb. 2003). Applicants are using a combination of both phrases. Thus, it is not clear what is the scope of the claims.

Claims 20, 22, and 24 are indefinite because they are missing a terminal period. It is not clear where applicants intend the claims to end.

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-4 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,629,117 (Katsukawa) combined with US 6,528,645 B1 (Hamasaki), Diamond, Handbook of Imaging Materials, pages 395-396 (Diamond), and US 5,737,669 (Ring).

Katsukawa discloses a positively charged single-layer photosensitive member comprising a conductive support and a photosensitive layer. The photosensitive layer comprises 5 parts by weight of a titanyl phthalocyanine, 30 parts by weight of an electron transport material, 50 parts by weight of a particular benzidine compound as the hole transport material, and 100 parts by weight of the polycarbonate Z resin (2-2), which has a viscosity-average molecular weight of 20,000 to 25,000. See the polycarbonate Z resin (2-2) at col. 8; examples 327, 335, 343, 351, and 359 in Tables 48 through 52, respectively; and col. 55, line 36, to col. 56, line 6. The viscosity-average molecular weight of 20,000 to 25,000 is within the range of 20,000 or greater recited in instant claims 2 and 9. Polycarbonate Z resin (2-2) is present in an amount of 54% by weight of the total weight of the photosensitive layer. (The weight percentage was determined from the amounts used in the examples.) The weight percentage of 54% is within the range of 40 to 70% recited in instant claims 2 and 9. Katsukawa discloses that its photosensitive member has superior mechanical

strength and repeat characteristics. Col. 1, line 65, to col. 2, line 1. The photosensitive member also has a high sensitivity and a high glass transition temperature. Col. 2, lines 1-2.

Katsukawa does not exemplify the use of a titanyl phthalocyanine as recited in the instant claims. However, Katsukawa does not limit the type of titanyl phthalocyanine used. Col. 23, line 56, and col. 24, lines 4-5.

Hamasaki discloses titanyl phthalocyanine crystals that exhibit a maximum peak in the powder X-ray diffraction pattern at the Bragg angle $2\theta \pm 0.2°$ of 27.2°. See, for example, Preparation example 1 at cols. 20-21 and Figs. 2 and 3. Hamasaki's titanyl phthalocyanine crystals are within the compositional limitations recited in instant claims 1 and 8. According to Hamasaki, when its titanyl phthalocyanine crystals are used in positively charged single layer photosensitive layers, the layers have good sensitivity characteristics "that are always stable regardless of the lapsed time after preparing the coating solution" comprising said titanyl phthalocyanine crystals. Col. 3, lines 64-67, and Table 2, examples 1-12.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Hamasaki, to use Hamasaki's titanyl phthalocyanine crystal as the titanyl

phthalocyanine in the single layer photosensitive layer disclosed by Katsukawa, because that person would have had a reasonable expectation of successfully obtaining a positively charged single layer photosensitive member that has good stable sensitivity characteristics.

Katsukawa does not exemplify the use of an endless conductive flexible substrate as recited in the instant claims. However, Katsukawa does not limit the type of conductive substrate used. Katsukawa discloses that "[a]s the conductive substrate . . . various materials having conductivity can be used." Col. 26, lines 22-26. Katsukawa also discloses that the conductive substrate may be in the form of a sheet, and that the substrate may be "plastic materials vapor-deposited or laminated with . . . metal." Col. 26, lines 28-30 and 33.

As shown in Diamond, it is well-known in the art that an image loop (i.e., endless belt) can be fabricated from a flexible web comprising a conductive layer and a photoreceptor layer where the ends of the web are joined together to form an endless belt. Diamond, page 396, lines 4-5. The photoreceptor layer may be a single layer. Id., page 395, line 27.

According to Ring, the laser or LED-array printer comprising a photoreceptive image-carrying drum has several disadvantages. See Ring, col. 1, line 36, to col. 2, line 9.

For example, Ring teaches that "the drum . . . and the [other] elements positioned adjacent the drum surface are relatively large elements since they all must be at least as wide as a sheet of a printing medium, on the order of 8.5 to 12 inches or larger." Col. 1, lines 37-42. Ring also discloses that "if an LED-array head is employed . . . the head must be at least as wide as the drum . . . so that an electrostatic image is formed on the drum surface during a single pass of the drum." Ring discloses that "if a laser is employed, relatively sophisticated mirrors and/or prisms must be employed for the same purpose." The "relatively long LED-array head or the lasers and related optical devices represent a significant portion of the cost of producing the drum printer." Col. 1, lines 46-55. To overcome these disadvantages, Ring discloses a small-scale and inexpensive electrophotographic printer comprising a photoreceptive member in the form of an endless belt **20** stretched over rollers **26a** and **26b**. Fig. 2; col. 4, lines 20-36; and col. 4, line 50, to col. 5, line 52. According to Ring, its electrophotographic printer requires a relatively short LED array and can form multichrome or color images at a relatively low cost. Col. 9, lines 39-45.

It would have been obvious to a person having ordinary skill in the art, in view of the combined teachings of

Katsukawa, Diamond, and Ring, to use a flexible web support coated with a conductive layer as taught by Diamond and Katsukawa as the conductive support in the positively charged single layer organic photosensitive member rendered obvious over the combined teachings of Katsukawa and Hamasaki, and to form an endless belt from the resulting photosensitive member as taught by Diamond. That person would have had a reasonable expectation of successfully obtaining an endless flexible positively charged single layer photosensitive member having the properties disclosed by Katsukawa and Hamasaki that is capable of being used in a small-scale electrophotographic printer taught by Ring, which is capable of providing multichrome and color images at a relatively low cost.

10. Claims 1, 2, 5, 7, 8, 9, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,198,889 B1 (Yu) combined with European Patent 574,154 A1 (EP'154) and Hamasaki.

Yu discloses an electrophotographic copying apparatus comprising an endless flexible electrophotographic photoreceptor belt **10** which is stretched over a plurality of cylindrical rollers **12, 14, 16,** and **18**, a charging station **31**, an image exposure station **33**, and image development stations **41**, **42**, **43**, and **44**, cleaning station **22.** See Fig. 2, and col. 8,

lines 44-65. Yu further discloses that generally small diameter support rollers having a diameter of 1.9 cm (i.e., 19 mm) are used for simple, reliable copy paper stripping systems in an electrophotographic imaging apparatus using a photoreceptor belt system operating in a very confined space. Col. 3, lines 1-6. The other components besides the endless belt are arranged on the periphery of the endless belt. See Fig. 2. The other components have the structure or equivalents thereof shown in Fig. 3 of the instant specification because they are used in forming an image by an electrophotographic process. See the definition of "means for electrophotography processing" in paragraph 5, supra. The diameter of 19 mm is within the range of 5 mm to 20 mm recited in instant claim 5. Yu exemplifies an endless flexible belt comprising a biaxially oriented thermoplastic polyester coated with titanium. See example 1 at col. 12.

Yu does not exemplify an endless flexible photoreceptor belt comprising a single photosensitive layer as recited in the instant claims.

EP'154 discloses the disadvantages of using dual-layer photoconductive layers comprising a charge generation layer and a charge transport layer. Accordingly to EP'154, the charge transport layers are required to have high carrier mobility and

usually comprise hole transport materials. The photoconductors comprising said dual-layer photoconductive layer are negatively charged by a corona discharge, which produces a large amount of ozone due to a reaction with oxygen in the ambient air. Page 2, lines 17-21. The ozone leads to environmental contamination and degradation of the photoconductors. Page 2, lines 21-22. EP'154 discloses that single-layer photoconductive layers including electron transport materials can be easily produced and have a number of advantages in the prevention of coating defects and improvement of optical characteristics of the photoconductor. Page 2, lines 39-41. EP'154 discloses a positively charged single photosensitive layer that is within the compositional limitations recited in instant claims 1 and 8, but for the particular titanyl phthalocyanine recited in the instant claims. The photosensitive layer comprises 3 parts by weight of a titanyl phthalocyanine, 50 parts by weight of a particular electron transport material, 50 parts by weight of a hole transport material, and 100 parts by weight of a polycarbonate resin. Page 9, lines 24-25; page 10, lines 21-26; and example 9 in Table 1 at page 11. The polycarbonate resin is present in an amount of 49 wt% based on the weight of the photosensitive layer, which is within the weight ratio range of 40 to 70 % recited in instant claims 2 and 9. The weight

percentage was determined from the amounts used in example 9. EP'154 discloses that its positively charged single photosensitive layer has extremely low residual potential and excellent sensitivity. Said photosensitive layer also can used in a rapidly operated copying machine, a printer, or the like. Page 3, lines 4-50. EP'154 does not exemplify the use of an endless flexible substrate as recited in the instant claims. However, EP'154 does not limit the type of conductive substrate used. EP'154 discloses that the "[a]s the conductive substrate . . . various conductive materials can be used." Page 8, lines 36-37. EP'154 also discloses that the conductive substrate may be a plastic material vapor-deposited on or laminated with a metal. Page 8, lines 39-40.

It would have been obvious to a person having ordinary skill in the art, in view of the combined teachings of EP'154, to use the positively charged single photosensitive layer disclosed by EP'154 as the photosensitive layer in the endless flexible photoreceptor belt in the apparatus disclosed by Yu, because that person would have a reasonable expectation of successfully obtaining an electrophotographic apparatus that does not produce ozone and has excellent sensitivity.

Neither Yu nor EP'154 exemplifies the use of a titanyl phthalocyanine exhibiting an X-ray diffraction pattern as

recited in the instant claims. However, EP'154 does not limit the type of titanyl phthalocyanine used. EP'154, page 7, lines 52 and 56.

Hamasaki discloses titanyl phthalocyanine crystals that exhibit a maximum peak in the powder X-ray diffraction pattern at the Bragg angle 2θ ± 0.2° of 27.2° that is within the compositional limitations recited in instant claims 1 and 8. The discussion of Hamasaki in paragraph 9 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Hamasaki, to use Hamasaki's titanyl phthalocyanine crystal as the titanyl phthalocyanine in the endless flexible positively charged single-layered photoreceptor belt in the apparatus rendered obvious over the combined teachings of Yu and EP'154, because that person would have had a reasonable expectation of successfully obtaining an electrophotographic apparatus that has good stable sensitivity characteristics.

11. Applicants' arguments filed in Amdt122303 with respect to the rejections set forth in paragraphs 9 and 10 above have been fully considered but they are not persuasive.

Applicants argue that the combined teachings of Katsukawa, Diamond, and Ring and of Yu and EP'154 fail to teach or suggest the use of the specific titanyl phthalocyanine compound as recited in instant claims for the reasons sought by applicants.

However, as discussed in the rejections in paragraphs 9 and 10 above, Hamasaki teaches a titanyl phthalocyanine crystal that exhibits an X-ray diffraction pattern that is within the compositional limitation of the titanyl phthalocyanine recited in instant claims 1 and 8. Hamasaki further teaches that its titanyl phthalocyanine crystal may be used as the charge generation material in positively charged single layer photosensitive members. Hamasaki provides reason, motivation, and suggestion to a person having ordinary skill in the art to use its titanyl phthalocyanine crystal as the titanyl phthalocyanine in the single-layer photosensitive member disclosed by Katsukawa or in the single photosensitive layer disclosed by EP'154. Accordingly, for the reasons discussed in the rejections, the combined teachings of Katsukawa, Hamasaki, Diamond, and Ring and of Yu, EP'154, and Hamasaki render the instantly claimed photosensitive member prima facie obvious.

12. Claims 1, 2, 8, 9, 15-18, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,528,645 (Hamasaki) combined with Diamond and Ring.

Hamasaki discloses a positively charged single layer photosensitive member comprising a conductive support and a photosensitive layer that is within the compositional limitations recited in instant claims 1, 2, 8, 9, 15-18, 23, and 24. The photosensitive layer comprises 5 parts by weight of a particular titanyl phthalocyanine crystal, 70 parts by weight of the distyryl hole transport compound HT-10, and 30 parts by weight of the napththoquinone electron transport compound ET-2, and 100 parts by weight of a polycarbonate resin. See the distyryl hole transport compound HT-10 at col. 15; the napththoquinone electron transport compound ET-2 at col. 12; col. 24, lines 1-10; and Table 2 at col. 26, example 10. The titanyl phthalocyanine crystal exhibits a maximum peak in the powder.X-ray diffraction pattern at the Bragg angle 2θ ± 0.2° of 27.2°. See Preparation example 1 at cols. 20-21 and Figs. 2 and 3. The distyryl hole transport compound HT-10 meets the limitation recited in instant claims 17 and 18. The naphthoquinone electron transport compound ET-2 meets the limitations recited in instant claims 15, 16, 23, and 24. The polycarbonate resin is present in an amount of 49 wt% based on

the weight of the photosensitive layer, which is within the weight ratio range of 40 to 70 % recited in instant claims 2 and 9. The weight percentage was determined from the amounts used in the example. Hamasaki discloses that its photosensitive member has excellent sensitivity characteristics. Col. 3, lines 64-67, and Table 2, example 10.

Hamasaki does not exemplify the use of an endless conductive flexible substrate as recited in the instant claims. However, Hamasaki does not limit the type of conductive substrate used. Hamasaki discloses that "various materials having conductivity can be used." Col. 19, lines 42-44. Hamasaki also discloses that the conductive substrate may be in the "form of a sheet or drum according to the structure of the image forming apparatus to be used," and that the substrate may be "plastic materials prepared by depositing or laminating the above metals." Col. 19, lines 48-50 and 56-58.

As shown in Diamond, it is well-known in the art that an image loop (i.e., endless belt) can be fabricated from a flexible web comprising a conductive layer and a photoreceptor layer where the ends of the web are joined together to form an endless belt. Diamond, page 396, lines 4-5. The photoreceptor layer may be a single layer. Id., page 395, line 27.

Ring teaches the advantages of using photosensitive members in the form of an endless belt over photosensitive members in the form of drums. Ring also discloses a small-scale and inexpensive electrophotographic printer comprising a photoreceptive member in the form of an endless belt **20** stretched over rollers **26a** and **26b**. The discussion of Ring in paragraph 9, supra, is incorporated herein by reference.

It would have been obvious to a person having ordinary skill in the art, in view of the combined teachings of Hamasaki, Diamond, and Ring, to use a flexible web support coated with a conductive layer as taught by Diamond and Hamasaki, as the conductive support in the positively chargeable single layer organic photosensitive member taught by Hamasaki, and to form an endless belt from the resulting photosensitive member as taught by Diamond. That person would have had a reasonable expectation of successfully obtaining an endless flexible positively charged single-layer photosensitive member having the properties disclosed by Hamasaki that is capable of being used in a small-scale electrophotographic printer as taught by Ring, which is capable of providing multichrome and color images at a relatively low cost.

13. Claims 19, 20, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamasaki combined with Diamond and Ring, as applied to claim 15 above, further combined with Japanese Patent 2000-314970 (JP'970). See the Japanese Patent Office machine-assisted translation of JP'970 for cites.

The combined teachings of Hamasaki, Diamond, and Ring render obvious an endless flexible positively charged single layer photosensitive member as described in paragraph 12 above, which is incorporated herein by reference.

Hamasaki does not exemplify a single photosensitive layer comprising an electron transport compound as recited in the instant claims. However, Hamasaki does not limit the electron transport compound to those used in the examples of Hamasaki. Rather, Hamasaki teaches that "[a]s the electron transferring material, there can be used any of various electron transferring compounds which have conventionally been known." Col. 11, lines 49-51. In addition, Hamasaki does not limit the hole transport compound to those used in the examples of Hamasaki. Hamasaki teaches that "[a]s the hole transporting material, there can be used any of various hole transferring compounds which have conventionally been known." Col. 13, lines 11-13. The hole transporting compounds may be stilbene compounds. Col. 14, line 10.

JP'970 teaches a single photosensitive layer comprising a particular stilbene hole transporting compound (HT1) and the azoquinone electron transporting compound (ET4-5). Translation, paragraphs 0010 and 0015; compound (ET4-5) in paragraph 0054; and example 4 in Table 1 in paragraph 0093. JP'970 teaches that the stilbene quinone compound (ET2-1) and the naphthoquinone compound (ET8-1) are equivalent to the azoquinone compound ET4-5 as preferred electron transporting compounds to be used in combination with the particular stilbene hole transporting compound (HT1). Translation, paragraphs 0013 and 0019; compound (ET2-1) in paragraph 0052; and compound (ET8-1) in paragraph 0064. The electron transporting compound (ET8-1) is identical to the napththoquinone electron transport compound ET-2 in the single photosensitive layer disclosed by Hamasaki. According to JP'970, single photosensitive layers comprising its particular stilbene hole transporting compound (HT1) combined with the preferred electron transporting compound, such as those discussed above, have "improved stability in repeated use of electric properties in positive charge." Translation, paragraphs 0009, 0010, and 0102; and example 4 in Tables 3 and 4 in paragraphs 0090 and 0100, respectively.

It would have been obvious to a person having ordinary skill in the art, in view of the combined teachings of JP'970, to use the stilbene hole transporting compound (HT1) of JP'970 in combination with the equivalent stilbene quinone (ET2-1), the azoquinone (ET4-5), or the naphthoquinone (ET8-1) electron transporting compound as the hole transporting compound and electron transporting compound, respectively, in the single-layer photosensitive member rendered obvious over the combined teachings of Hamasaki, Diamond, and Ring. That person would have had a reasonable expectation of successfully obtaining an endless flexible positively charged single-layer photosensitive member that has good stable electric properties in repeated use, as taught by JP'970, and that is capable of being used in a small-scale electrophotographic printer as taught by Ring, which is capable of providing multichrome and color images at a relatively low cost.

14. Claims 6 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach or suggest an imaging apparatus comprising an endless flexible single-layer photosensitive body stretched with a tension of "50 N/cm per unit length of the width" of the photosensitive body over a plurality of cylindrical rollers as recited in instant claims 6 and 13. Nor is there enough information on the present record to determine whether the photosensitive belt disclosed by the prior art has a tension of "50 N/cm per unit length of the width" of the belt when stretched over a plurality of rollers as recited in instant claims 6 and 13.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

JLD
1/21/04

Janis L. Dote
JANIS L. DOTE
PRIMARY EXAMINER
GROUP ~~1500~~ 1700